

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the present application.

Listing of Claims:

1. (Cancelled)

2. (Cancelled)

3. (Cancelled)

4. (Cancelled)

5. (Currently Amended) An The apparatus as recited in claim 4 for use in a communication system, the apparatus comprising:

a receiver, including a plurality of receiver chains adapted for processing in the receiver, for receiving a pilot channel and determining a channel condition of said pilot channel; and

a control system for controlling receive diversity and power consumption of said receiver by selecting a number of said plurality of receiver chains based on said determined channel condition;

wherein:

said control system is configured for reducing said number of selected receiver chains when said determined channel condition is above a first channel condition threshold,

said control system is configured for increasing said number of selected receiver chains when said determined channel condition is below a second channel condition threshold,

said first channel condition threshold corresponds to a stronger channel condition than a channel condition corresponding to said second channel condition threshold, and

wherein said control system is configured for adjusting a delta threshold corresponding to

a difference between said first and second channel condition thresholds based on a mobility level of said receiver in said communication system.

6. (Currently Amended) The apparatus as recited in claim 5 wherein said control system is configured for increasing said delta threshold in response to an increasing increase in the mobility level and reducing said delta threshold in response to a decreasing decrease in the mobility level.

7. (Cancelled)

8. (Cancelled)

9. (Cancelled)

10. (Cancelled)

11. (Currently Amended) A The method as recited in claim 10 further for determining receive diversity in a receiver of a communication system, the method comprising steps of:

receiving a pilot channel at the receiver, using a plurality of receiver chains in the receiver, said receiver chains being adapted for processing in the receiver;

determining a channel condition of said pilot channel;

selecting a number of said plurality of receiver chains used for processing in the receiver based on said determined channel condition for controlling receive diversity and power consumption of said receiver;

reducing said number of selected receiver chains when said determined channel condition is above a first channel condition threshold;

increasing said number of selected receiver chains when said determined channel condition is below a second channel condition threshold, wherein said first channel condition threshold corresponds to a stronger channel condition than a channel condition corresponding to

said second channel condition threshold; and

adjusting a delta threshold corresponding to a difference between said first and second channel condition thresholds based on a mobility level of said receiver in said communication system.

12. (Currently Amended) The method as recited in claim 11 wherein the step of adjusting comprises: further comprising:

increasing said delta threshold in response to an ~~increasing~~ increase in the mobility level.

13. (Currently Amended) The method as recited in claim 11 wherein the step of adjusting comprises: further comprising:

reducing said delta threshold in response to a ~~decreasing~~ decrease in the mobility level.

14. (Currently Amended) A method in a communication system for decoding a quick paging channel (QPCH) comprising:

determining a channel condition of a pilot channel received at a mobile station in said communication system;

determining receive diversity at a receiver of said mobile station by determining a number of a plurality of receiver chains of said receiver for receive diversity based on said determined channel condition, wherein the number is reduced in response to the channel condition being above a first threshold, the number is increased in response to the channel condition being below a second threshold, and a difference between the first threshold and the second threshold is adjusted in response to mobility of the mobile station; and

determining a first data bit of said QPCH received at said mobile station in accordance with processing of one or more signals produced based on said determined receive diversity,

wherein power consumption of said receiver is controlled based on said receive diversity.

15. (Original) The method as recited in claim 14 further comprising:

switching said mobile station to a sleep mode when said determined first data bit is a zero.

16. (Original) The method as recited in claim 14 further comprising:
determining a second data bit of said QPCH received at said mobile station when said determined first data bit is either a one or an erasure.

17. (Previously Presented) The method as recited in claim 16 further comprising:
directing resources of said mobile station to decode a received channel when said determined second data bit is either a one or an erasure.

18. (Previously Presented) The method as recited in claim 16 further comprising:
switching said mobile station to a sleep mode when said determined second data bit is a zero.

19. (Currently Amended) An apparatus for decoding a quick paging channel (QPCH) in a communication system comprising:

a receiver for determining a channel condition of a pilot channel received at a mobile station in said communication system;

a controller for determining receive diversity at said receiver by determining a number of a plurality of receiver chains of said receiver for receive diversity based on said determined channel condition, wherein the number is reduced in response to the channel condition being above a first threshold, the number is increased in response to the channel condition being below a second threshold, and a difference between the first threshold and the second threshold is adjusted in response to mobility of the mobile station, and wherein a first data bit of said QPCH received at said receiver is determined in accordance with processing of one or more signals produced based on said determined receive diversity,

wherein power consumption of said receiver is controlled based on said receive diversity.

20. (Original) The apparatus as recited in claim 19 wherein said controller is configured to switch said mobile station to a sleep mode when said determined first data bit is a zero.

21. (Previously Presented) The apparatus as recited in claim 19 wherein, when said determined first data bit is either a one or an erasure, a second data bit of said QPCH received at said mobile station is determined, and said controller is configured for directing resources of said mobile station to decode a received channel when said determined second data bit is either a one or an erasure and switching said mobile station to a sleep mode when said determined second data bit is a zero.

22. (Currently Amended) A method for decoding a quick paging channel (QPCH) in a communication system comprising:

determining a first data bit of said QPCH received at a receiver, including a plurality of receiver chains for receive diversity, in a mobile station in said communication system;

determining receive diversity at said receiver of said mobile station ~~when in response to~~ said determined first data bit ~~is being~~ a one or an erasure, wherein said determining said receive diversity includes determining a number of said plurality of receiver chains for receive diversity based on a channel condition of a pilot channel received at said receiver,

wherein power consumption of said receiver is controlled based on said receive diversity.

23. (Cancelled)

24. (Currently Amended) The method as recited in claim 22 further comprising:

switching said mobile station to a sleep mode ~~when in response to~~ said determined first data bit ~~is being~~ a zero.

25. (Previously Presented) The method as recited in claim 22 further comprising:

determining a second bit of said QPCH received at said receiver in accordance with a receive processing of said determined receive diversity;

directing said mobile station resources to receive a receive channel when said determined second bit is either a one or an erasure.

26. (Currently Amended) The method as recited in claim 22 further comprising:

determining a second bit of said QPCH received at said receiver in accordance with a processing of said determined receive diversity; and

switching said mobile station to a sleep mode ~~when~~ in response to said determined second data bit is being a zero.

27. (Currently Amended) An apparatus for decoding a quick paging channel (QPCH) in a mobile station in a communication system comprising:

a receiver for determining a first data bit of said QPCH, wherein said receiver includes a plurality of receiver chains for receive diversity; and

a control system for selecting, in response to the first data bit being a one or an erasure, a number of said plurality of receiver chains for receive diversity based on a channel condition of a pilot channel received at said receiver,

wherein power consumption of said receiver is controlled based on said receive diversity.

28. (Currently Amended) The apparatus as recited in claim 27 wherein said control system switches said mobile station to a sleep mode ~~when~~ in response to said determined first data bit is being a zero.

29. (Cancelled)

30. (Previously Presented) The apparatus as recited in claim 27 wherein said receiver determines a second bit of said QPCH in accordance with a receive processing of said determined receive diversity, and said control system directs said mobile station resources to receive a receive channel when said determined second bit is either a one or an erasure.

31. (Currently Amended) The apparatus as recited in claim 27 wherein said receiver determines a second bit of said QPCH in accordance with a processing of said determined receive diversity, and said control system switches said mobile station to a sleep mode ~~when~~ in response to said determined second data bit is being a zero.

32. (Currently Amended) A method for decoding a quick paging channel (QPCH) in a communication system comprising:

determining a first data bit of said QPCH received at a receiver, the receiver including a plurality of receiver chains for receive diversity, in a mobile station in said communication system;

switching said mobile station to a sleep mode ~~when~~ in response to said determined first data bit ~~is~~ being a zero;

determining a second bit of said QPCH received at said receiver ~~when~~ in response to said first data bit of said QPCH ~~is~~ being either a one or an erasure;

determining receive diversity at said receiver of said mobile station ~~when~~ in response to said determined second data bit ~~is~~ being an erasure based on a channel condition of pilot channel received at said receiver;

directing said mobile station resources to receive a receive channel ~~when~~ in response to said determined second data bit ~~is~~ being a one, in accordance with a receive processing of said determined receive diversity;

wherein power consumption of said receiver ~~is controlled based~~ depends on said receive diversity.

33. (Cancelled)

34. (Currently Amended) An apparatus for decoding a quick paging channel (QPCH) in a mobile station of a communication system, the apparatus comprising:

a receiver for determining a first data bit of said QPCH received at said receiver, wherein said receiver includes a plurality of receiver chains for receive diversity, and for determining a second data bit of said QPCH received at said receiver when said first data bit of said QPCH is either a one or an erasure;

a control system for switching said mobile station to a sleep mode ~~when~~ in response to said determined first data bit ~~is~~ being a zero, for determining receive diversity at said receiver ~~when~~ in response to said determined second data bit ~~is~~ being an erasure based on a channel condition of pilot channel received at said receiver, and for directing resources of said mobile

station to receive a receive channel in accordance with a receive processing of said determined receive diversity when said determined second data bit is a one,

wherein power consumption of said receiver is controlled based on said receive diversity.

35. (Canceled)

36. (Currently Amended) A method for decoding a quick paging channel (QPCH) in a communication system comprising:

determining a first data bit of said QPCH received at a receiver, the receiver including a plurality of receiver chains for receive diversity, in a mobile station in said communication system;

switching said mobile station to a sleep mode ~~when~~ in response to said determined first data bit ~~is being~~ a zero;

determining a second bit of said QPCH received at said receiver ~~when~~ in response to said first data bit of said QPCH ~~is being~~ a one;

determining first receive diversity at said receiver of said mobile station ~~when~~ in response to said determined first data bit ~~is being~~ an erasure based on a channel condition of pilot channel received at said receiver, wherein the step of determining the second bit is performed and determining said second bit of said QPCH received at said receiver in accordance with said determined first receive diversity,

wherein power consumption of said receiver is controlled based on ~~said~~ receive diversity.

37. (Original) The method as recited in claim 36 further comprising:

directing said mobile station resources to receive a receive channel when said determined second data bit is a one.

38. (Currently Amended) The method as recited in claim 36 further comprising:

determining second receive diversity at said receiver of said mobile station when in response to said determined second data bit ~~is being~~ an erasure based on a channel condition of the pilot channel received at said receiver and directing resources of said mobile station to

receive a receive channel, after said determining second receive diversity at said receiver, in accordance with a receive processing of said determined second receive diversity.

39. (Currently Amended) An apparatus for decoding a quick paging channel (QPCH) in a communication system comprising:

a receiver for determining a first data bit of said QPCH received at said receiver, the receiver including a plurality of receiver chains for receive diversity, in a mobile station in said communication system and determining a second bit of said QPCH received at said receiver when said first data bit of said QPCH is a one;

a control system for switching said mobile station to a sleep mode ~~when in response to~~ said determined first data bit ~~is being~~ a zero and for determining first receive diversity at said receiver of said mobile station ~~when in response to~~ said determined first data bit ~~is being~~ an erasure based on a channel condition of pilot channel received at said receiver, and wherein said receiver determines said second bit of said QPCH received at said receiver in accordance with said determined first receive diversity,

wherein power consumption of said receiver is controlled based on ~~said~~ receive diversity.

40. (Original) The apparatus as recited in claim 39 wherein said control system directs said mobile station resources to receive a receive channel when said determined second data bit is a one.

41. (Currently Amended) The apparatus as recited in claim 39 wherein said control system determines second receive diversity at said receiver of said mobile station ~~when in response to~~ said determined second data bit ~~is being~~ an erasure based on a channel condition of the pilot channel received at said receiver and directing resources of said mobile station to receive a receive channel, after said determining second receive diversity at said receiver, in accordance with a receive processing of said determined second receive diversity.

42. (Currently Amended) An apparatus for use in a communication system, the apparatus comprising:

means for receiving a pilot channel and determining a channel condition of said pilot channel to obtain a determined channel condition;

means for controlling receive diversity and power consumption of a ~~receiver~~ mobile device based on said determined channel ~~condition; and reducing condition~~, wherein the means for controlling is configured to reduce a number of receiver chains ~~when in response to said determined channel condition is being above a first channel condition threshold; threshold,~~ increase the number of receiver chains in response to said determined channel condition being below a second channel condition threshold, and adjust a difference between said first channel condition threshold and said second channel condition threshold based on a mobility level of said mobile device.

43. (Cancelled)

44. (Cancelled)

45. (Cancelled)

46. (Cancelled)

47. (Currently Amended) A non-transitory ~~The~~ computer-readable storage medium storing instructions for determining receive diversity in a receiver of a communication system, as recited in claim 46; the instructions comprising code for:

receiving a pilot channel at the receiver, using a plurality of receiver chains in the receiver, said receiver chains being adapted for processing in the receiver;

determining a channel condition of said pilot channel to obtain a determined channel condition;

selecting a number of said plurality of receiver chains used for processing in the receiver based on said determined channel condition for controlling receive diversity and power consumption of said receiver;

reducing said number of selected receiver chains when said determined channel condition

is above a first channel condition threshold;

increasing said number of selected receiver chains when said determined channel condition is below a second channel condition threshold, wherein said first channel condition threshold corresponds to a stronger channel condition than a channel condition corresponding to said second channel condition threshold; and

adjusting a delta threshold corresponding to a difference between said first and second channel condition thresholds based on a mobility level of said receiver in said communication system.

48. (Currently Amended) The non-transitory computer-readable storage medium as recited in claim 47, the instructions further comprising code for:

increasing said delta threshold in response to an increasing increase in the mobility level.

49. (Currently Amended) The non-transitory computer-readable storage medium as recited in claim 47, the instructions further comprising code for:

reducing said delta threshold in response to a decreasing decrease in the mobility level.

50. (Currently Amended) A processor for determining receive diversity in a receiver of a communication system, the processor comprising:

means for receiving a pilot channel and determining a channel condition of said pilot channel to obtain a determined channel condition;

means for controlling receive diversity and power consumption of said receiver based on said determined channel ~~condition; and~~ reducing condition, wherein the means for controlling is configured to reduce a number of receiver chains when said determined channel condition is above a first channel condition ~~threshold;~~ threshold, increase the number of receiver chains when said determined channel condition is below a second channel condition threshold, and adjust a difference between said first channel condition threshold and said second channel condition threshold based on a mobility level of said receiver.